PATENT USSN: 10/595,480 Atty Dckt No.: 034166.024

#### **AMENDMENT**

#### IN THE CLAIMS:

Please amend the claims as follows:

# 1-9. (Canceled)

10. (Currently amended) The composite catalyst according to claim 9 A composite catalyst for water electrolysis, comprising iridium oxide particles deposited on or dispersed around inorganic oxide particles, wherein said inorganic oxide particles have a BET surface area in the range of 50 to 400 m²/g and are present in a quantity of less than 20 wt.% based on the total weight of the composite catalyst, further comprising ruthenium oxide in an amount resulting in an Ir / Ru-atomic ratio in the range of 4/1 to 1/4.

### 11. (Canceled)

12. (Previously presented) The composite catalyst according to claim 10, wherein the inorganic oxide particles are selected from the group consisting of titania (TiO<sub>2</sub>), silica (SiO<sub>2</sub>), alumina (Al<sub>2</sub>O<sub>3</sub>), zirconia (ZrO<sub>2</sub>), tin dioxide (SnO<sub>2</sub>), doped tin oxide (SnO<sub>2</sub>/F),ceria, CeO<sub>2</sub>/ZrO<sub>2</sub>, niobium pentoxide (Nb<sub>2</sub>O<sub>5</sub>), tantalum pentoxide (Ta<sub>2</sub>O<sub>5</sub>) and combinations thereof.

## 13-14. (Canceled)

- 15. (Previously presented) The composite catalyst according to claim 10, wherein the water solubility of the inorganic oxide particles, as determined according to EN ISO 787, part 8, is lower than 0.15 g/l, at 20°C.
- 16. (Previously presented) The composite catalyst according to claim 11, wherein the water solubility of the inorganic oxide particles, as determined according to EN ISO 787, part 8, is lower than 0.15 g/l, at 20°C.

PATENT USSN: 10/595,480

Atty Dckt No.: 034166.024

17. (Canceled)

18. (Previously presented) The composite catalyst according to claim 10, wherein the iridium

oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

19. (Canceled)

20. (Previously presented) The composite catalyst according to claim 12, wherein the iridium

oxide particles comprise iridium(IV)-oxide, iridium(III)-oxide or mixtures thereof.

21-26. (Canceled)

27. (Withdrawn, Currently amended) An article of manufacture comprising the composite

catalyst according to claim 9 claim 10 as an anode catalyst in an electrode.

28. (Withdrawn, Currently amended) A catalyst-coated membrane (CCM) comprising the

composite catalyst according to claim 9 claim 10.

29. (Withdrawn, Currently amended) A membrane-electrode assembly (MEA) for PEM water

electrolysis containing the composite catalyst according to elaim 9 claim 10.

30. (Withdrawn, Currently amended) An article of manufacture selected from the group

consisting of a regenerative fuel cell (RFC), a sensor and an electrolyser containing the

composite catalyst according to elaim 9 claim 10.

31. (Currently amended) A composite catalyst made according to claim 10 prepared by a process

which comprises:

a) making a mixture by dissolving an iridium precursor compound and optionally a

ruthenium precursor compound in an aqueous solution containing inorganic oxide

particles,

3

PATENT USSN: 10/595,480 Atty Dckt No.: 034166.024

b) adjusting the pH of the mixture to be in the range of 6 to 10 to deposit or disperse iridium on or around the inorganic oxide particles,

- c) separating and drying the inorganic oxide particles having iridium deposited thereon or dispersed around, and
- d) heat treating the inorganic oxide particles at temperatures in the range of 300 to 800 °C to give obtain the composite catalyst which contains iridium oxide particles deposited on or dispersed around the inorganic oxide particles.
- 32. (Previously presented) The composite catalyst of claim 31, wherein the inorganic oxide particles have a BET surface area in the range of 50 to 400 m<sup>2</sup>/g and are present in a quantity of less than 20 wt.% based on the total weight of the composite catalyst.
- 33. (Canceled)